

EVERY DROP COUNTS

ACTIVITY 30

WATER, WATER EVERYWHERE

Materials:

Blue food coloring
1 large clear container big enough to hold 1 gallon
1 medium clear container big enough to hold 1 cup
4 small, clear containers (test tubes would be ideal, but juice glasses or small plastic party cups from the grocery store would also work)
1 full set of cup measures
1 full set of measuring spoons
Masking tape
Marker

Procedure:

1. Set out all the containers, measuring cups and spoons where the class will be able to see them.
2. With the masking tape and magic marker, make a label for each of the five water categories you'll be discussing: (1) Oceans - 97% (2) Polar Ice - 2.2% (3) Saltwater Lakes, Soil, Atmospheric Moisture, Glaciers - 0.1% (4) Deep Underground - 0.3% (5) Fresh (rivers, lakes, shallow groundwater) - 0.3%. Leave the labels stuck to the edge of the counter until you've filled the containers with the appropriate amount of water, then attach them.
3. Fill the large clear container with exactly six cups of water.
4. Add a few drops of the blue food coloring.
5. Ask "How much of the Earth's surface is covered by water?" *3/4 or 75%*.
Hold up or point to the large, full container.
"This represents all of the water on the planet."
6. Scoop three tablespoons from the big container into the medium container. Attach the "**Oceans**" label to the big container and hold it up again.
"This represents the 97% of the Earth's water that is in the oceans."
Hold up the medium container.
"This represents the other 3% of the world's water."
7. From the medium container, measure out two tablespoons and one-half teaspoon and pour into the first small container. Attach the "**Polar Ice**" label and hold it up.
"This amount represents the 2.2% of the Earth's water that is frozen in polar ice."

EVERY DROP COUNTS

8. Again from the medium container, measure out one-half teaspoon and pour into the second small container. Attach the **“Saltwater Lakes, etc.”** label and hold it up.

“This amount represents the 0.1% of the Earth’s water that is in saltwater lakes, soil and atmospheric moisture, and glaciers.”

9. From the medium container, measure out one-half of the remaining water (1 teaspoon) and pour into the third small container. Attach the **“Deep Underground”** label and hold it up.

“This amount represents the 0.3% of the Earth’s water that is deep underground.”

10. Pour out the rest of the water (1 teaspoon) from the medium container into the fourth small container. Attach the **“Fresh (etc.)”** label and hold up.

“This amount represents the 0.3% of the Earth’s water that is fresh (rivers, lakes, shallow groundwater).”

Discussion Questions:

1. Which of these kinds of water could we use for daily purposes, such as washing dishes, brushing your teeth and drinking?

*The 0.3% of fresh water and maybe some of the deep groundwater.
(Hold up containers #3 and #4.)*

2. What sources of water can’t we use for those purposes?

*Salt water, water we can’t reach, or polluted water.
(Hold up containers #1, #2, and #3.)*

3. Do you think it’s important for us to be careful with this water? Why?

